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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,012	09/07/2006	David Skuse	07812.0059-00	6868

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EXAMINER	
ABU ALI, SHUANGYI	

ART UNIT	PAPER NUMBER
1793	

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02/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,012	SKUSE ET AL.	
	Examiner	Art Unit	
	SHUANGYI ABU ALI	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/23/2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 5-17, 19-43 and 47-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/66510 to Lyons et al.

The reference differs from Applicant's recitations of claims by not disclosing

identical ranges. However, the reference discloses "close" ranges, and close ranges have been held to establish prima facie obviousness.

Regarding claim 1, Lyons et al. disclose a composition comprising ground calcium carbonate (GCC) particles and precipitated calcium carbonate (PCC) particles. The calcium carbonates particles have a steepness factor larger than about 38 for GCC and 50 for PCC. The median particle size of both calcium carbonates is less than 0.8 um (page 5, lines 14-16, page 8, lines 15-17 and page 9, line 5).

Regarding claim 5, Lyons et al. disclose the composition comprising a kaolin clay (page 5, line 7).

Regarding claims 6-7, Lyons et al. disclose the weight ratio of calcium carbonate to kaolin clay is in the range of at least about 60:40 (page 10, line 3).

Regarding claim 8, Lyons et al. disclose the composition comprising a blend of GCC and PCC particles (page 5, lines 16-15 and 16)

Regarding claim 9, Lyons et al. disclose the composition is an aqueous suspension (page 5, lines 22-24).

Regarding claim 10, Lyons et al. disclose the composition applied in paper coating (page 1, line 2).

Regarding claims 11-17, Lyons et al. disclose the calcium carbonate particle in the composition having a median size of 0.2-0.8 um (page 9, lines 5-6).

Regarding claims 19 and 20, Lyons et al. disclose a composition used in paper coating comprising a mixture of ground calcium carbonate (GCC) and precipitated calcium carbonate (PCC) and a binder (page 5 lines 14-16 and 24). The calcium

carbonate particles have a median size in the range of 0.2-0.8 um. The calcium carbonates have a steepness factor larger than about 38 for GCC and 50 for PCC (page 8, lines 15-17 and page 9, line 5).

Regarding claim 21, Lyons et al. disclose that the binder amount in the coating composition is in the range of 4% -20% (page 20 line 13).

Regarding claims 22 and 23, Lyons et al. disclose the binder used in the composition can be starches or starch derivatives (page 19, lines 20).

Regarding claim 24, Lyons et al. disclose that the binder may comprise of starches and polymeric lattices (page 19 lines 15-23).

Regarding claim 25, Lyons et al. disclose additives such as cross linker and anti-foamers can be added into the composition (page 21 lines 22 –30).

Regarding claim 26, Lyons et al. disclose the composition optionally comprising of 0.01 % to 1% of dispersant (page 21 lines 3 and 9).

Regarding claims 27-33, Lyons et al. disclose that the PCC particles have a median in the range of 0.2-0.8 μm (page 8, lines 15-17 and page 9, line 5).

Regarding claim 34, Lyons et al. disclose the composition comprising GCC, PCC particles and a binder (page 21 lines 3 and 9).

Regarding claim 35, Lyons et al. disclose a method of making a coating composition by mixing the carbonates, kaolin, binder in an aqueous medium (page 27 lines 18 and 19, page 5, lines 14-16, page 8, lines 15-17 and page 9, line 5).

Regarding claim 36, Lyons et al. disclose a method of preparing a coated substrate comprising applying the composition to the substrate (page 27 lines 25 and 26) and then calendaring the substrate (page 28, line 7).

Regarding claim 37, Lyons et al. disclose a method of preparing a coated paper (page 1, lines 14 and 15).

Regarding claim 38, Lyons et al. disclose a method of making a coated substrate by applying optimum amount of coating composition to the paper and drying it (page 23 line 17, 20 and page 28, line 7). The composition used in paper coating comprise of a mixture of ground calcium carbonate (GCC) and precipitated calcium carbonate (PCC) and a binder (page 5 lines 14-16 and 24). The calcium carbonate particles have a median size in the range of 0.2-0.8 um. The calcium carbonates have a steepness factor larger than about 38 for GCC and 50 for PCC (page 8, lines 15-17 and page 9, line 5).

Regarding claim 39, Lyons et al. disclose the substrate is paper (page 1, lines 14 and 15).

Regarding claims 40-43, Lyons et al. disclose the kaolin clay particles have a median size of 0.3-0.8 um (page 9, line 2).

Regarding claims 47-48, Lyons et al. disclose the kaolin clay particles have a shape factor of less than 25 (page 18, lines 11-13).

Regarding claim 49, Lyons et al. disclose the kaolin clay particles have a median size of 0.3-0.8 um and a shape factor of less than 25 (page 9, line 2 and page 18, lines 11-13).

Regarding claims 50 and 51, Lyons et al. disclose the kaolin clay particles have a steepness factor larger than 38 (page 8, line 9).

Regarding claim 52, Lyons et al. disclose that the binder may comprise of starches and polymeric lattices (page 19 lines 15-23).

Regarding claim 53, Lyons et al. disclose the composition optionally comprising of 0.01 % to 1% of dispersant (page 21 lines 3 and 9).

Claims 2-4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/66510 to Lyons et al., in view of U.S. Patent NO. 5,879,442 to Nishiguchi et al.

Regarding claims 2-4, Lyons et al. disclose a coating composition comprising GCC and PCC as applicant set forth in claim 1. But they are silent about the GCC and PCC amount ratio as applicant set forth in claims 2-4.

However Nishiguchi et al. also drawn to paper coating composition disclose a coating composition having a GCC amount to PCC amount ratio in the range of 49:51 to 30:70 (col. 4, line 62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use Nishiguchi et al. composition ratio motivated by the fact that Nishiguchi et al. disclose that the selection of the amount ratio of GCC to PCC is depended on the intended use and the above ratio range renders high content carbonates slurry and the coated paper has good printability and glossiness (col. 2 lines 23-28 and col. 1 line, 10-20).

Regarding claim 18, Nishiguchi et al. disclose a composition comprising GCC and PCC particles.

Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/66510 to Lyons et al., in view of U.S. Patent Application Publication No. US 2005/0126730 to Lorusso.

Regarding claims 44-46, Lyons et al. disclose a coating composition comprising GCC and PCC as applicant set forth in claim 1. But they are silent about the shape factor of claims 44-46.

However it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use kaolin particles as applicant set forth in claims 44-46 motivated by the fact that Lorusso also drawn to composition for paper disclose that a composition comprising calcium carbonate particles and kaolin particles with a shape factor larger than 60 is suitable for paper filler ([0011] and [0001]).

Response to Arguments

Applicant's arguments with respect to claims 1, 5-17, 19-33, 35-43 and 47-53 dated 12/23/2008 have been considered but are moot in view of the new ground(s) of rejection.

The prior art discloses an overlapping and/or close range of the particle steepness. Close ranges have been held to establish prima facie obviousness.

Applicant argues that the examples disclosed by the prior art fail to disclose the limitation of the instant application. To this argument the examiner respectfully disagrees. While the reference does not provide a specific example which falls within the instant claims, it should be noted that "A reference can be used for all it realistically teaches and is not limited to the disclosures in its specific examples". See In re Van Marter et al 144 USPQ 421; In re Windmer et al 147 USPQ 518, 523; and In re Chapman et al 148 USPQ 711.

Applicant argues that Nishiguchi is silent about the steepness of the particles. The Examiner respectfully submits that Nishiguchi is used to show the ratio of the GCC to PCC. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Sine the rejection based on Lyon about the steepness is valid, the rejection based on combined teaching of Lorusso and Lyon stands.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHUANGYI ABU ALI whose telephone number is (571)272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Marcheschi/
Primary Examiner, Art Unit 1793

sa